CC Docket No. 98-166

Billingsley Exhibit No. RSB-5

Capital Asset Pricing Model Analysis of the Cost of Equity Capital

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CAPITAL ASSET PRICING MODEL ANALYSIS OF THE COST OF EQUITY CAPITAL

I. Description of the Approach

The capital asset pricing model (CAPM) is a theory of the relationship between the risk of a security or a portfolio of securities and the expected rate of return that is commensurate with that risk. The theory is based on the assumption that security markets are efficient and dominated by risk averse investors. In other words, the CAPM argues that investors are willing to take on more risk only if they can reasonably expect a higher return.

The CAPM accepts the risk/return trade-off economic principle and quantifies that trade-off. Further, the model assumes that most investors diversify their investment holdings so as to not put "all of their eggs in one basket." Indeed, the tendency for investors to diversify their investment portfolios implies that, in a CAPM context, the only type of risk that is rewarded or relevant in the risk/return trade-off is systematic or market-related risk. Thus, the additional risk created by not diversifying among investments is not rewarded by the securities markets under the CAPM.

The measurable relationship between risk and expected return in the CAPM is summarized by the following expression:

$$R_t = R_f + Bi [R_m - R_f],$$

where R_i is the expected return on security or portfolio i, R_f is the return on a risk-free security like a U.S. Treasury bond, B_i is the beta of security or portfolio i, and Rm is the expected return on a broad index of equity market performance like the Standard & Poor's Composite 500 Index (S&P 500).

II. Economic Rationale for the Approach

The rationale for the CAPM equation is the common sense observation that investors must be coaxed to move their money from riskless assets like U.S. Treasury bonds into risky assets. Consider an everyday example wherein investors can obtain about a 7% return on a Treasury security. Investors will not invest in a broad market portfolio of risky securities unless they can expect a significant return premium for accepting the risk in excess of the riskless security. In terms of the above example, investors would want an expected return that is greater than 7% if material risk is present. The usefulness of the

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CAPM is in measuring how much of an expected return premium is appropriate for investments in light of their riskiness relative to the risk of a benchmark broad market index.

The economic interpretation of the CAPM equation is as the base risk-free rate of return [Rf] plus the market-wide risk premium of $[R_m - R_f]$ that is required to coax investors away from exclusive investment in risk-free securities. The beta coefficient measures the riskiness of a given security or portfolio relative to the overall market benchmark. Beta expresses how much the given investment's returns tend to vary as the returns on the benchmark market index vary over the business cycle. Beta therefore may be viewed as the appropriate weight to apply to the market-wide risk premium $[R_m - R_f]$. The beta of the market portfolio must, by definition, be equal to 1.

Consider an example of how the CAPM estimates the appropriate risk-adjusted expected return on an investment. Assume that the risk-free rate of return on a U.S. Treasury bond is 7%, the expected return on the market is 15%, and that an investor wants to determine the appropriate expected rate of return on a stock with a beta of 1.5. The market-wide risk premium is [15% - 7%] or 8%. This implies that investors will not allocate money to investments with market-like riskiness unless they can expect to get at least an 8% premium over the risk-free rate of 7%. However, a 8% premium will be insufficient if an investment is more variable (i.e., riskier) than the overall market. The returns on a stock with a beta of 1.5 tend to vary 1.5 times more than the return on the overall market. The market-wide risk premium of 8% must therefore be increased 1.5 times to 12% in order to attract investors. Thus, a stock with a beta of 1.5 should generate an expected return of 19% in order to adequately compensate investors for the above-market risk of the investment.

III. Consistency of the Approach with Regulatory and Economic Standards

The CAPM is consistent with the appropriate public utility regulatory and economic standards. Specifically, the CAPM is consistent with the regulatory principle set forth in the **Hope** case that the allowed return of a public utility should be "...commensurate with the returns on investments in other enterprises having corresponding risk." The CAPM is also consistent with the regulatory standard that emerged from the **Bluefield** decision, which states that the "... return should be reasonably sufficient to assure confidence in the financial soundness of the utility and ...enable it to raise the money necessary for the proper discharge of its public duties."

In terms of the appropriate economic standards, the CAPM produces return estimates that should meet investors opportunity costs, satisfy the demands of the risk/return trade-off,

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and is consistent with the empirical evidence that supports a high degree of efficiency in U.S. financial markets.

IV. Usefulness of the CAPM in Estimating the Cost of Equity Capital

The primary usefulness of the CAPM is as a conceptual tool for systematically relating expected returns to risk. The model requires market-based data inputs that are largely objective and relatively easy to obtain. The shortcoming of the CAPM is that available empirical evidence indicates that the beta coefficient may not fully capture all of the sources of market risk. This implies that CAPM-based estimates of the cost of equity should be supplemented with alternative approaches that use other measures of risk. For this reason, my cost of equity analysis does not rely solely on the CAPM but also uses the DCF model and the risk premium approach to corroborate the reasonableness of my cost of equity estimates for the target regulated firm.

V. Data for CAPM Analysis

A. Beta Coefficients

Since the target, the average local telephone operating company, consists largely of firms that are wholly-owned subsidiaries of their respective holding companies, there is little direct equity market price data available and therefore few beta coefficients required by the CAPM. Thus, as discussed above in the DCF analysis section of my statement, it is necessary to identify a group of firms that has traded equity and is comparable in risk to the target. Consequently, the beta coefficients for the portfolio used in my DCF analysis that is identified in Billingsley Exhibit No. RSB-3 is relied on to estimate the ILECs' cost of equity.

Importantly, the beta coefficients presented in Billingsley Exhibit No. RSB-3 are not historical betas like those commonly quoted by Value Line, Standard & Poor's, or Merrill Lynch. While frequently used, such historical estimates of beta are inconsistent with the CAPM's reliance on prospective beta coefficients. Historical estimates only reflect the past riskiness of an equity security that need not be representative of the future riskiness that is relevant to equity investors. The CAPM is formulated in terms of investor expectations, which clearly transcend exclusive reliance on historical measures of riskiness like betas based solely on the past return performance of stocks. The beta coefficients used in my CAPM analysis are prospective measures supplied by BARRA, a widely recognized provider of data and decision support systems for institutional investors.

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BARRA describes its predicted beta as follows:

> In the BARRA E2 multiple-factor model, factors are estimated for 13 risk indices and for 55 industry groups...each risk index is built from a number of underlying fundamental data items that capture elements of risk. By combining them, we produce a multifaceted measure of risk that best characterizes the single concept we are trying to measure. The individual data items are called descriptors. The combined descriptors make up the risk index (*BARRA U.S. Equity Beta Book*, January 1997).

B. Risk-Free Rate of Return

In order to be consistent with the expectational emphasis of the CAPM, I use the average expected yield implied by the prices of the U.S. Treasury bond futures contracts quoted during the most recent month for which data are available. These future contracts are obligations to either take or make delivery of 8% coupon, 20-year Treasury bonds for a fixed price (yield) at a specified future date. The prices of these contracts reflect the market's objective consensus forecast of long-term, low-risk interest rates. The rate on long-term Treasury securities is chosen to be consistent with the long-time horizon of equities. A more detailed explanation of the data and calculations is provided in Billingsley Exhibit No. RSB-6.

C. Expected Return on the Equity Market

In order to focus on the prospective nature of the CAPM, I use expectational data to estimate the return on the S&P 500 as my proxy for overall equity market performance. Billingsley Exhibit No. RSB-7 elaborates on how the DCF model is applied to estimate the expected return on the S&P 500 using both IBES and Zacks growth rate forecasts. The S&P 500 data used in the CAPM analysis reflect expected returns as of the most recent month for which data are available (January of 1999).

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Billingsley Exhibit No. RSB-6

Treasury Bond Futures Interest Rate

CALCULATION OF U. S. TREASURY BOND FUTURES' IMPLIED INTEREST RATE

The interest rate implied by the price of a U.S. Treasury Bond futures contract cannot be directly taken from **The Wall Street Journal**. Rather, it must be calculated as follows:

$$(Price\ of\ Contract)\ X\ 10 = \frac{\$40}{(1+i)^1} + \frac{\$40}{(1+i)^2} + ... + \frac{\$40}{(1+i)^{40}} + \frac{\$1,000}{(1+i)^{40}},$$

where i = the semi-annual rate of return.

The implied annual rate of return on U.S. Treasury bond futures is calculated as:
Annual Rate of Return = $(1 + i)^2 - 1$.

The U.S. Treasury Bond futures contract prices shown below are averaged, by contract maturity, using the Friday settlement prices for January of 1999.

U.S. TREASURY BOND FUTURES CONTRACT DATA

Contract Maturity	01/08/99	01/15/99	01//22/99	01/29/99	Average Price	Implied Yield
03/99	125.1563	126.5313	127.8125	128.1875	126.9219	5.80%
06/99	124.6875	126.0625	127.4063	127.5625	126.4297	5.84%
09/99	124.2188	125.5625	126.9063	127.1250	125.9532	5.88%
12/99	123.3438	124.9688	126.3125	126.8125	125.3594	5.92%

AVERAGE IMPLIED YIELD   **5.86%**

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Billingsley Exhibit No. RSB-7

Market Risk Premium Approach to Estimating the Cost of Equity Capital

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MARKET RISK PREMIUM APPROACH TO ESTIMATING
THE COST OF EQUITY CAPITAL

I. Nature and Economic Justification for the Market Risk Premium Approach

The market risk premium approach is a systematic way of quantifying the risk/return trade-off concerning the economic standards used in cost of equity analysis. The market risk premium is defined as the difference between the return on a broad basket of equity securities (the "Market") and the return on a far less risky benchmark security or portfolio. The return on long-term U.S. Treasury bonds and the return on utility bonds are common benchmarks. The economic justification for examining the difference between the return on the market and a benchmark security's return is to measure the premium that is necessary to coax investors to move from investing in a "risk-free" or lower risk security into a higher risk equity investment. This premium is often referred to as the equity risk premium.

My analysis identifies a market risk premium on public utility bonds and then adds that premium to the current expected return on such bonds. This determines a reasonable expected rate of return on the equity market.

II. Estimation of the Equity Market Risk Premium

A. Overview of Approaches

There are two fundamental approaches to estimating the equity risk premium. The first approach is prospective and the second approach is historical. The equity risk premium can be estimated by surveying investors' expectations concerning the premium's magnitude. Similarly, a prospective approach like the DCF model can be used to estimate the equity risk premium that is implied by the relationship among analysts' consensus growth forecasts for the market, the general level of the market, and the expected return on a low-risk benchmark security. Alternatively, the historical relationship between earned returns on the equity market and earned returns on a low-risk benchmark security can be measured, thereby revealing an average historical (earned) equity risk premium.

While it is clear that investors trade on the basis of expectations (i.e., prospective factors), these expectations are not directly observable. However, there cannot be any confidence that historical return patterns will be repeated in the future.

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B. Specific Estimation Approach

1. General Description

Since the DCF model is prospective in nature, I also use a prospective approach to estimate the equity risk premium. I examine the relationship between expected returns on the Standard & Poor's Composite 500 Index (S&P 500), as estimated   by the DCF model using Institutional Brokers Estimate Service (IBES) growth rate projections and the current market yield on public utility bonds over a recent period. This average expected risk premium is added to the average yield that has prevailed on appropriately-rated public utility bonds over the most recent three months for which data are available (November 1998 – January 1999).

2. Estimation of the Expected Market Return

In recognition of the fact that most firms pay dividends on a quarterly basis, the quarterly form of the DCF model is used to estimate the expected market return on the S&P 500. As in the discussion of the DCF analysis in Billingsley Exhibit No. RSB-2, it is assumed that dividends grow at a given rate over a year with the yearly change in the amount paid by a firm occurring on average after the second quarter of each year.

3. Source of the Expected Growth Rate

The expected growth rate used in the quarterly version of DCF model is the consensus mean market value-weighted five-year earnings per share estimate published by IBES for the S&P 500. Dividend yield data are obtained from Standard & Poor's **Outlook**, restated on a quarterly basis.

4. Interest Rate Reference Point

An index of public utility bond yields is used as the relevant security benchmark in the analysis. As discussed in my statement, A-rated bond yields are used as the benchmark for the appropriate ILEC target. A three-month average (November 1998 – January 1999) of the interest rate benchmark is used in the calculation of the expected market risk premium.

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5. Computational Procedure

The expected risk premium E(RP) as of point t in time is calculated as the simple arithmetic difference between the expected return on the S&P 500 at time t [E(S&P500$_t$)], produced by applying the DCF model to the S&P 500, and the given average monthly public utility bond yield at time t [R(UBOND$_t$]. Thus, risk premiums are calculated as:

$$E(RP_t) = E(SP500_t) - R(UBOND_t)$$

The average expected risk premium E(RP) for the time period spanning N months is calculated as:

$$E(RP) = \sum_{t=1}^{n} \frac{E(RP_t)}{N}$$

The current expected return on the S&P 500 is estimated by adding the average expected risk premium E(RP) to the average yield prevailing on the chosen public utility bonds over the three month period from November of 1998 to January of 1999.

It is important to note that the resulting cost of equity estimates for the overall equity market are not adjusted for flotation costs. They are consequently a conservative reference point for estimating the cost of equity in the overall market.

6. Time Period of the Analysis

The statistical analysis uses data on expected market risk premiums and public utility bond yields over the period from October of 1987 through January of 1999. This time period is dictated by the availability of consistent IBES expected growth rate forecast data.

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III. Nature and Implications of Changes in the Risk Premium Over Time

A. Evidence of Variability

Studies of the historical behavior of the equity risk premium find that it varies considerably over time. Of particular interest is that the equity risk premium is related inversely to returns on the traditionally used benchmark securities. These benchmarks often include U.S. government or corporate debt securities. Thus, when interest rates decline, the equity risk premium widens and when interest rates rise, the equity risk premium narrows.

The most plausible explanation for this inverse relationship is that investors' attitudes towards risk change over time. As hypothesized by the Nobel prize-winning financial economist, Professor William F. Sharpe, when investors are doing well financially, they are optimistic and require relatively low risk premiums and when investors are doing poorly, they are pessimistic and require relatively high risk premiums. Since the general level of interest rates is an indicator of where the economy is in a cycle, it is reasonable to expect an inverse relationship between interest rates and equity risk premiums.

B. Adjustments for Instability

The above observation suggests another way of using the risk premium approach to evaluate the cost of equity capital for a target firm. Research by professors R. S. Harris and F. C. Marston, published in **Financial Management** in 1992, finds evidence that the equity risk premium tends to move an average of -.651 of contemporaneous changes in the return on a benchmark low-risk security (index). That is, if interest rates decline by 100 basis points, the equity risk premium required increases by approximately 65 basis points.

In Professor Harris and Marston's work, the benchmark low-risk security index is composed of long-term U.S. Treasury Bonds and the equity market proxy is the S&P500. Therefore, adjusting for the difference between the level of the rates on the benchmark low-risk security during the sampled time period and the current level of such rates generates an equity risk premium estimate that is modified explicitly for a prominent source of its instability over time. This estimated risk premium is added to the current level (i.e., the most recent month, January of 1999) of the benchmark low-risk security's rate.

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Billingsley Exhibit No. RSB-8

Expected Market Risk Premium Approach: "A" Rating Base

EXPECTED MARKET RISK PREMIUM: "A" RATING BASE

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
10/87	14.82%	11.34%	3.48%
11/87	15.06	10.82	4.24
12/87	15.46	10.98	4.48
01/88	15.65	10.76	4.89
02/88	15.52	10.10	5.42
03/88	15.42	10.09	5.33
04/88	15.45	10.54	4.91
05/88	15.42	10.81	4.61
06/88	15.65	10.79	4.86
07/88	15.63	11.04	4.59
08/88	15.72	11.17	4.55
09/88	15.66	10.61	5.05
10/88	15.63	10.01	5.62
11/88	15.64	9.90	5.74
12/88	15.58	10.06	5.52
01/89	15.54	10.08	5.46
02/89	15.39	10.07	5.32

EXPECTED MARKET RISK PREMIUM

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
03/89	15.34	10.23	5.11
04/89	15.35	10.18	5.17
05/89	15.40	9.99	5.41
06/89	15.22	9.64	5.58
07/89	15.36	9.50	5.86
08/89	15.14	9.52	5.62
09/89	14.94	9.58	5.36
10/89	15.02	9.54	5.48
11/89	15.17	9.51	5.66
12/89	15.12	9.44	5.68
01/90	15.18	9.56	5.62
02/90	15.29	9.76	5.53
03/90	15.47	9.85	5.62
04/90	15.62	9.92	5.70
05/90	15.70	10.00	5.70
06/90	15.71	9.80	5.91
07/90	15.81	9.75	6.06

EXPECTED MARKET RISK PREMIUM

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
08/90	15.69	9.92	5.77
09/90	15.91	10.12	5.79
10/90	16.04	10.05	5.99
11/90	16.23	9.90	6.33
12/90	16.16	9.73	6.43
01/91	16.17	9.71	6.46
02/91	16.01	9.47	6.54
03/91	15.85	9.55	6.30
04/91	15.61	9.46	6.15
05/91	15.55	9.44	6.11
06/91	15.59	9.59	6.00
07/91	15.59	9.55	6.04
08/91	15.62	9.29	6.33
09/91	15.59	9.16	6.43
10/91	15.52	9.12	6.40
11/91	15.58	9.05	6.53

EXPECTED MARKET RISK PREMIUM

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
12/91	15.65	8.88	6.77
01/92	15.60	8.84	6.76
02/92	15.71	8.93	6.78
03/92	15.57	8.97	6.60
04/92	15.53	8.93	6.60
05/92	15.54	8.87	6.67
06/92	15.45	8.78	6.67
07/92	15.44	8.57	6.87
08/92	15.46	8.44	7.02
09/92	15.57	8.40	7.17
10/92	15.53	8.54	6.99
11/92	15.56	8.63	6.93
12/92	15.57	8.43	7.14
01/93	15.29	8.27	7.02
02/93	15.07	8.04	7.03
03/93	15.00	7.90	7.10
04/93	14.71	7.81	6.90
05/93	14.81	7.86	6.95

EXPECTED MARKET RISK PREMIUM

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
06/93	14.73	7.75	6.98
07/93	14.61	7.54	7.07
08/93	14.59	7.25	7.34
09/93	14.43	7.04	7.39
10/93	14.50	7.03	7.47
11/93	14.52	7.30	7.22
12/93	14.50	7.34	7.16
01/94	14.55	7.33	7.22
02/94	14.59	7.47	7.12
03/94	14.66	7.85	6.81
04/94	14.69	8.22	6.47
05/94	14.77	8.33	6.44
06/94	14.89	8.31	6.58
07/94	14.95	8.47	6.48
08/94	14.78	8.41	6.37
09/94	14.82	8.64	6.18
10/94	14.80	8.86	5.94

EXPECTED MARKET RISK PREMIUM

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
11/94	14.95	8.98	5.97
12/94	14.96	8.76	6.20
01/95	15.01	8.73	6.28
02/95	14.95	8.52	6.43
03/95	14.95	8.37	6.58
04/95	14.89	8.27	6.62
05/95	14.93	7.91	7.02
06/95	14.89	7.60	7.29
07/95	14.92	7.70	7.22
08/95	14.95	7.83	7.12
09/95	14.95	7.62	7.33
10/95	14.89	7.46	7.43
11/95	14.90	7.43	7.47
12/95	14.82	7.23	7.59
01/96	14.68	7.22	7.46
02/96	14.79	7.37	7.42
03/96	14.79	7.73	7.06

EXPECTED MARKET RISK PREMIUM

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
04/96	14.80	7.89	6.91
05/96	15.01	7.98	7.03
06/96	14.99	8.06	6.93
07/96	14.97	8.02	6.95
08/96	15.10	7.84	7.26
09/96	15.22	8.01	7.21
10/96	15.21	7.77	7.44
11/96	15.24	7.49	7.75
12/96	15.31	7.59	7.72
01/97	15.22	7.77	7.45
02/97	15.16	7.64	7.52
03/97	15.11	7.87	7.24
04/97	15.36	8.03	7.33
05/97	15.49	7.89	7.60
06/97	15.56	7.72	7.84
07/97	15.62	7.48	8.14
08/97	15.62	7.51	8.11
09/97	15.66	7.47	8.19

EXPECTED MARKET RISK PREMIUM

Time Period	Standard & Poor's 500 DCF Cost of Equity	Moody's A Public Utility Bonds	Market Risk Premium
10/97	15.61	7.35	8.26
11/97	15.57	7.25	8.32
12/97	15.48	7.16	8.32
01/98	15.54	7.04	8.50
02/98	15.63	7.12	8.51
03/98	15.56	7.16	8.40
04/98	15.57	7.16	8.41
05/98	15.69	7.16	8.53
06/98	15.77	7.03	8.74
07/98	15.85	7.03	8.82
08/98	16.14	7.00	9.14
09/98	16.16	6.93	9.23
10/98	16.10	6.96	9.14
11/98	16.39	7.03	9.36
12/98	16.60	6.91	9.69
01/99	16.99	6.97	9.72
AVERAGE	**15.34%**	**8.62%**	**6.72%***

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* Calculated as the average of the monthly risk premiums, not as the differences of the averages for the entire time.

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Billingsley Exhibit No. RSB-9

"A" vs. Treasury Bond Yields

"A" vs. Treasury Bond Yields

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
10/87	11.34%	9.62%	1.72%
11/87	10.82%	8.91%	1.91%
12/87	10.98%	9.09%	1.89%
01/88	10.76%	8.81%	1.95%
02/88	10.10%	8.42%	1.68%
03/88	10.09%	8.59%	1.50%
04/88	10.54%	8.98%	1.56%
05/88	10.81%	9.26%	1.55%
06/88	10.79%	9.06%	1.73%
07/88	11.04%	9.22%	1.82%
08/88	11.17%	9.37%	1.80%
09/88	10.61%	9.11%	1.50%
10/88	10.01%	8.92%	1.09%
11/88	9.90%	9.02%	0.88%
12/88	10.06%	9.01%	1.05%
01/89	10.08%	8.94%	1.14%
02/89	10.07%	9.00%	1.07%
03/89	10.23%	9.14%	1.09%
04/89	10.18%	9.06%	1.12%
05/89	9.99%	8.90%	1.09%
06/89	9.64%	8.35%	1.29%

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
07/89	9.50%	8.10%	1.40%
08/89	9.52%	8.11%	1.41%
09/89	9.58%	8.17%	1.41%
10/89	9.54%	8.00%	1.54%
11/89	9.51%	7..89%	1.62%
12/89	9.44%	7.90%	1.54%
01/90	9.56%	8.24%	1.32%
02/90	9.76%	8.48%	1.28%
03/90	9.85%	8.57%	1.28%
04/90	9.92%	8.75%	1.17%
05/90	10.00%	8.73%	1.27%
06/90	9.80%	8.43%	1.37%
07/90	9.75%	8.50%	1.25%
08/90	9.92%	8.85%	1.07%
09/90	10.12%	8.99%	1.13%
10/90	10.05%	8.86%	1.19%
11/90	9.90%	8.58%	1.32%
12/90	9.73%	8.23%	1.50%
01/91	9.71%	8.20%	1.51%
02/91	9.47%	8.08%	1.39%
03/91	9.55%	8.21%	1.34%
04/91	9.46%	8.22%	1.24%
05/91	9.44%	8.24%	1.20%

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
06/91	9.59%	8.48%	1.11%

07/91	9.55%	8.44%	1.11%
08/91	9.29%	8.15%	1.14%
09/91	9.16%	7.96%	1.20%
10/91	9.12%	7.95%	1.17%
11/91	9.05%	7.91%	1.14%
12/91	8.88%	7.69%	1.19%
01/92	8.84%	7.61%	1.23%
02/92	8.93%	7.86%	1.07%
03/92	8.97%	8.00%	0.97%
04/92	8.93%	7.95%	0.98%
05/92	8.87%	7.89%	0.98%
06/92	8.78%	7.83%	0.95%
07/92	8.57%	7.59%	0.98%
08/92	8.44%	7.39%	1.05%
09/92	8.40%	7.34%	1.06%
10/92	8.54%	7.50%	1.04%
11/92	8.63%	7.56%	1.07%
12/92	8.43%	7.46%	0.97%
01/93	8.27%	7.34%	0.93%
02/93	8.04%	7.06%	0.98%
03/93	7.90%	6.78%	1.12%
04/93	7.81%	6.85%	0.96%

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
05/93	7.86%	6.92%	0.94%
06/93	7.75%	6.82%	0.93%

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
07/93	7.54%	6.63%	0.91%
08/93	7.25%	6.30%	0.95%
09/93	7.04%	6.03%	1.01%
10/93	7.03%	5.93%	1.10%
11/93	7.30%	6.24%	1.06%
12/93	7.34%	6.26%	1.08%
01/94	7.33%	6.29%	1.04%
02/94	7.47%	6.51%	0.96%
03/94	7.85%	6.94%	0.91%
04/94	8.22%	7.25%	0.97%
05/94	8.33%	7.32%	1.01%
06/94	8.31%	7.38%	0.93%
07/94	8.47%	7.60%	0.87%
08/94	8.41%	7.61%	0.80%
09/94	8.64%	7.84%	0.80%
10/94	8.86%	8.02%	0.84%
11/94	8.98%	8.17%	0.81%
12/94	8.76%	7.91%	0.85%
01/95	8.73%	7.86%	0.87%
02/95	8.52%	7.66%	0.86%
03/95	8.37%	7.52%	0.85%

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
04/95	8.27%	7.43%	0.84%
05/95	7.91%	7.04%	0.87%
06/95	7.60%	6.68%	0.92%

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
07/95	7.70%	6.75%	0.95%
08/95	7.83%	6.92%	0.91%
09/95	7.62%	6.44%	1.18%
10/95	7.46%	6.35%	1.11%
11/95	7.43%	6.29%	1.14%
12/95	7.23%	6.05%	1.18%
01/96	7.22%	6.05%	1.17%
02/96	7.37%	6.25%	1.12%
03/96	7.73%	6.62%	1.11%
04/96	7.89%	6.76%	1.13%
05/96	7.98%	6.94%	1.04%
06/96	8.06%	6.94%	1.12%
07/96	8.02%	7.05%	0.97%
08/96	7.84%	6.88%	0.96%
09/96	8.01%	7.00%	1.01%
10/96	7.77%	6.78%	0.99%
11/96	7.49%	6.55%	0.94%
12/96	7.59%	6.56%	1.03%
01/97	7.77%	6.82%	0.95%
02/97	7.64%	6.70%	0.94%

Date	Moody's A Public Utility Bond	30-Year U.S. Treasury Bond	A/U.S. Treasury Bond Spread
03/97	7.87%	6.96%	0.91%
04/97	8.03%	7.13%	0.90%
05/97	7.89%	6.93%	0.96%
06/97	7.72%	6.73%	1.00%
07/97	7.48%	6.53%	0.95%

08/97	7.51%	6.58%	0.93%
09/97	7.47%	6.49%	0.98%
10/97	7.35%	6.33%	1.02%
11/97	7.25%	6.08%	1.17%
12/97	7.16%	5.96%	1.20%
01/98	7.04%	5.83%	1.21%
02/98	7.12%	5.89%	1.23%
03/98	7.16%	5.92%	1.24%
04/98	7.16%	5.87%	1.29%
05/98	7.16%	5.93%	1.23%
06/98	7.03%	5.69%	1.52%
07/98	7.03%	5.68%	1.35%
08/98	7.00%	5.51%	1.49%
09/98	6.93%	5.19%	1.74%
10/98	6.96%	5.05%	1.91%
11/98	7.03%	5.26%	1.77%
12/98	6.91%	5.08%	1.83%
01/99	6.97%	5.19%	1.85%
AVERAGE	**8.62%**	**7.44%**	**1.18%**

Sources: *Moody's Bond Record* and *The Wall Street Journal.*

CC Docket No. 98-166

Billingsley Exhibit No. RSB-10

Market Value Capital Structure of ILEC Comparables

Market Value Capital Structure of Portfolio of Companies Comparable in Risk to the ILECs
January 1999[1]

COMPANY	MARKET VALUE OF COMMON EQUITY ($M)	BOOK VALUE OF TOTAL DEBT ($M)	BOOK VALUE OF PREFERRED EQUITY ($M)	DEBT / TOTAL CAPITAL[2]	EQUITY / TOTAL CAPITAL
Albertsons	14,989.90	1,226.73	0.00	0.0756	0.9244
Anheuser Busch	34,426.23	4,365.60	0.00	0.1125	0.8875
Atlantic Richfield	18,401.25	6,201.00	1.00	0.2521	0.7479
Avery Dennison	5,061.41	447.70	0.00	0.0813	0.9187
Campbell Soup	21,497.38	2,659.00	0.00	0.1101	0.8899
Cincinnati Bell	2,763.86	459.80	0.00	0.1426	0.8574
Clorox	12,908.40	939.45	0.00	0.0678	0.9322
Corning	11,290.50	1,338.80	19.80	0.1074	0.8926
Disney (Walt)	66,429.00	11,068.00	0.00	0.1428	0.8572
Donnelley (R R) & Sons	5,469.13	1,198.23	0.00	0.1797	0.8203
Dow Chemical	19,855.28	6,258.00	49.00	0.2411	0.7589
Du Pont (E I)	57,817.10	12,083.00	237.00	0.1757	0.8243
Heinz (H J)	20,464.98	3,107.90	0.20	0.1318	0.8682
Hershey Foods	8,039.93	1,317.38	0.00	0.1408	0.8592
Kellogg Co	16,683.88	1,995.20	0.00	0.1068	0.8932
Lilly (Eli)	104,042.03	2,553.70	0.00	0.0240	0.9760
May Department Stores	13,947.11	3,745.00	17.00	0.2124	0.7876
Procter & Gamble	122,757.95	4,992.00	225.00	0.0408	0.9592
Wal-Mart Stores	192,726.00	10,815.00	0.00	0.0531	0.9469

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[1] Base on closing common stock prices for the month and December 31, 1997 financial statements.
[2] Debt is defined as the book value of total debt plus the book value of preferred equity.

COMPANY	MARKET VALUE OF COMMON EQUITY ($M)	BOOK VALUE OF TOTAL DEBT ($M)	BOOK VALUE OF PREFERRED EQUITY ($M)	DEBT / TOTAL CAPITAL[2]	EQUITY / TOTAL CAPITAL
Warner-Lambert	59,106.64	2,203.30	0.00	0.0359	0.9641
Average[3]	40,433.90	3,948.74	27.45	0.1217	0.8783

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[3] The average debt and equity ratios are calculated as the average of the respective ratios for each individual company.

CC Docket No. 98-166

Billingsley Exhibit No. RSB-11

Billingsley Vita

RANDALL S. BILLINGSLEY

March 1999

BUSINESS ADDRESSES

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Department of Finance
Pamplin College of Business
Virginia Polytechnic Institute
 and State University
Blacksburg, VA 24061-0221
Phone: (540) 231-7374
Fax: (540) 231-4487

APPOINTMENTS

1994 - Current: Associate Professor of Finance
Virginia Polytechnic Institute & State University

1993: Vice President
Association for Investment Management and Research
Education and Programs Department

Duties: Project director, responsible for the development and design
of education technology products. Projects included videos
on options and futures analysis, ethical issues in the
investment profession, and financial statement analysis for
investment valuation and management.

Responsible for the design and offering of continuing
education programs to meet the needs of AIMR's members
in particular and the investment industry in general.

Associate Professor, On Leave of Absence
Virginia Polytechnic Institute & State University

1987-1992: Associate Professor of Finance
Virginia Polytechnic Institute and State University

1981-1987: Assistant Professor of Finance
Virginia Polytechnic Institute and State University

1978-1981: Lecturer of Finance

Texas A&M University

1977-1978: Lecturer of Economics
Research Assistant in Economics
Texas A&M University

Summers 1978, 1980: Research Associate
Texas Transportation Institute
Texas A&M University

Duties: (1978) Principal researcher and author of a study concerning design of optimal subsidy techniques for public transit projects. (1980) Co-author of research proposal for study of the projected economic impact of user charges on the Texas Gulf Intra-Coastal Waterway (proposal accepted and fully funded). Performed research concerning various policy issues in transportation economics.

PROFESSIONAL DESIGNATIONS

1986: Chartered Financial Analyst (CFA)
The Institute of Chartered Financial Analysts
(Association for Investment Management and Research)

1992: Certified Rate of Return Analyst (CRRA)
National Society of Rate of Return Analysts

EDUCATION

1982: Doctor of Philosophy in Finance, supporting field in Economics
Dissertation Title: "A Multivariate Analysis of Bank Holding Company Capital Note and Debenture Ratings"
Chairman: Dr. Donald R. Fraser
Texas A&M University

1978: Master of Science in Economics, supporting field in Statistics
Texas A&M University

1976: Bachelor of Arts in Economics

Texas Tech University

PRIMARY TEACHING AND RESEARCH INTERESTS

Teaching: Investments, Corporate Finance, Financial Institution Management.

Research: General interests include investments, valuation methods, cost of capital analysis, primary market pricing of debt instruments, and banking and public utility regulatory issues.

TEACHING HONORS

Teaching Excellence Award, The R. B. Pamplin College of Business, Virginia Polytechnic Institute and State University, 1986-1987.

Excellence In Teaching Award, MBA Association, Virginia Polytechnic Institute and State University, 1985-1986.

PUBLICATIONS

Journal Articles - Refereed

"The Benefits and Limits of Diversification Among Commodity Trading Advisors," *Journal of Portfolio Management*, Vol. 23, No. 1, Fall 1996, pp. 65-80 (Author listing: R. S. Billingsley and D. M. Chance).

"Why Do Firms Issue Convertible Debt?," *Financial Management*, Vol. 25, No. 2, Summer 1996, pp. 93-99, (Author listing: R. S. Billingsley and O.M. Smith).

"Simultaneous Debt and Equity Offerings and Capital Structure Targets," *Journal of Financial Research*, Vol. 17, No. 4, Winter 1994, (Author listing: R. S. Billingsley, D. M. Smith, and R. E. Lamy).

"Regional Reciprocal Interstate Banking: The Supreme Court and the Resolution of Uncertainty," *Journal of Banking and Finance*, Vol. 16, No. 1, 1992, pp. 665-686, (Author listing: R. S. Billingsley and R. E. Lamy).

"Integration of the Mortgage Market," *Journal of Financial Services Research*, Vol. 6, 1992, 137-155, (Author listing: R. S. Billingsley, V. A. Bonomo, and S. P. Ferris).

"Units of Debt with Warrants: Evidence of the 'Penalty-Free' Issuance of an Equity-Like Security," *The Journal of Financial Research*, Vol. 13, No. 3, Fall 1990, pp. 187-199, (Author listing: R. S. Billingsley, R. E. Lamy, and D. M. Smith).

"Shareholder Wealth and Stock Repurchases By Bank Holding Companies," *Quarterly Journal of Business and Economics*, Vol. 28, No. 1, Winter 1989, pp. 3-25, (Author listing: R. S. Billingsley, D. R. Fraser and G. R. Thompson).

Abstract: *Journal of Economic Literature*, Vol. 27, No. 3, September 1989, p. 1503.

"The Regulation of International Lending: IMF Support, the Debt Crisis, and Bank Shareholders," *Journal of Banking and Finance*, Vol. 12, No. 2, 1988, pp. 255-274, (Author listing: R. S. Billingsley and R. E. Lamy).

"Put-Call Ratios and Market Timing Effectiveness," *Journal of Portfolio Management*, Vol. 15, No. 1, Fall 1988, pp. 25-28, (Author listing: R. S. Billingsley and D. M. Chance).

Citation: "Using 'Dumb' Money as a Market Guide," Earl C. Gottschalk, Jr., the *Wall Street Journal*, January 17, 1989, p. C1.

"Bankruptcy Avoidance As A Merger Incentive," *Managerial Finance*, Vol. 14, No. 1, November 1988, pp. 25-33, (Author listing: R. S. Billingsley, D. J. Johnson, and R. P. Marquette).

"The Pricing and Performance of Stock Index Futures Spreads," *Journal of Futures Markets*, Vol. 8, No. 3, June 1988, pp. 303-318, (Author listing: R. S. Billingsley and D. M. Chance).

"The Choice Among Debt, Equity, and Convertible Bonds," The *Journal of Financial Research*, Vol. 11, No. 1, Spring 1988, pp. 43-55, (Author listing: R. S. Billingsley, R. E. Lamy, and G. R. Thompson).

"Valuation of Primary Issue Convertible Bonds," *The Journal of Financial Research*, Vol. 9, No. 3, Fall 1986, pp. 251-259, (Author listing: R. S. Billingsley, R. E. Lamy, and G. R. Thompson).

Abridged Reprint: *The CFA Digest*, Vol. 17, No. 2, Spring 1987, pp. 18-19.

"The Reaction of Defense Industry Stocks to World Events," *Akron Business and Economic Review*, Vol. 18, No. 2, Summer 1987, pp. 40-47, (Author listing: R. S. Billingsley, R. E. Lamy, and G. R. Thompson).

"Listed Stock Options and Managerial Strategy," *Strategy and Executive Action*, No. 4, Fall 1986, pp. 17-20, 28, (Author listing: R. S. Billingsley and D. M. Chance).

"Reevaluating Mortgage Refinancing "Rules of Thumb," *Journal of the Institute of Certified Financial Planners*, Vol. 7, No. 1, Spring 1986, pp. 37-45, (Author listing: R. S. Billingsley and D. M. Chance).

"Explaining Yield Savings on New Convertible Bond Issues," *Quarterly Journal of Business and Economics*, Vol. 24, No. 3, Summer 1985, pp. 92-104, (Author listing: R. S. Billingsley, R. E. Lamy, M. W. Marr, and G. R. Thompson).

Abstract: *Journal of Economic Literature*, Vol. 24, No. 2, June 1986, p. 1083.

"Options Market Efficiency and the Box Spread Strategy," *The Financial Review*, Vol. 20, No. 4, November 1985, pp. 287-301, (Author listing: R. S. Billingsley and D. M. Chance).

Reprint: *CFA Readings in Derivative Securities*, pp. 217-231, Charlottesville, VA: The Institute of Chartered Financial Analysts, 1988.

"Determinants of Stock Repurchases by Bank Holding Companies," *Journal of Bank Research*, Vol. 16, No. 3, Autumn 1985, pp. 128-35, (Author listing: R. S. Billingsley and G. R. Thompson).

"The Informational Content of Unrated Industrial Bonds," *Akron Business and Economic Review*, Vol. 16, No. 2, Summer 1985, pp. 53-58, (Author listing: R. S. Billingsley and R. E. Lamy).

"Split Ratings and Bond Reoffering Yields," *Financial Management*, Vol. 14, No. 2, Summer 1985, pp. 59-65, (Author listing: R. S. Billingsley, R. E. Lamy, M. W. Marr, and G. R. Thompson).

"Determinants of Bank Holding Company Bond Ratings," *The Financial Review*, Vol. 19, No. 1, March 1984, pp. 55-66, (Author listing: R. S. Billingsley and D. R. Fraser).

Abstract: *Journal of Economic Literature*, Vol. 22, No. 4, December 1984, p. 2010.
"Market Reaction to the Formation of One-Bank Holding Companies and the 1970 Bank Holding Company Act Amendment," *Journal of Banking and Finance*, Vol. 8, No. 2, 1984, pp. 21-33, (Author listing: R. S. Billingsley and R. E. Lamy).

Journal Articles - Other

"Preliminary Study Indicates Optimal Number of Advisors May Be 40 +," *Managed Account Reports*, Issue No. 185, July 1994, p. 13.

"Managing Portfolios Using Index Options," *Futures*, Vol. 14, No. 9, September 1985, pp. 70-74, (Author listing: D. M. Chance and R. S. Billingsley).

Monographs & Sponsored Research

"The Evolution of Depository Institution Regulation In The United States," in *Banking and Monetary Reform: A Conservative Agenda*, Catherine England, pp. 47-56, Washington, D. C.: The Heritage Foundation, 1985, (Author listing: R. S. Billingsley).

Fare Box and Public Revenue: How to Finance Public Transportation. State Department of Highways and Public Transportation, Texas Transportation Institute, February 1980, (Author listing: R. S. Billingsley, P. K. Guseman and W. F. McFarland).

Cases

"Merck & Company: A Comprehensive Equity Valuation Analysis," Charlottesville, VA: The Association for Investment Management and Research, (Author listing: R. S. Billingsley), 1996.

Adopted by the Candidate Curriculum Committee of the CFA Program: 1997.

"Equity Securities Analysis Case Study: Merck & Company," *The CFA Candidate Readings II*, Charlottesville, VA: The Association for Investment Management and Research, (Author listing: R. S. Billingsley), 1994.

Adopted by the Candidate Curriculum Committee of the CFA Program: 1994, 1995, and 1996.

Proceedings

"Bankruptcy Avoidance as a Merger Incentive: An Empirical Study of Failing Firms," *The Financial Review*, Vol. 18, No. 3, 1983, p. 94, (Author listing: R. S. Billingsley, D. J. Johnson, and R. P. Marquette).

"A Multivariate Analysis of the Ratings of Bank Holding Company Debt Issues," *The Financial Review*, Vol. 17, No. 2, July 1982, p. 57, (Author listing: R. S. Billingsley and D. R. Fraser).

Editor

"Corporate Decision Making and Equity Analysis," Seminar Proceedings, Charlottesville, VA: The Association for Investment Management and Research, (Author listing: R. S. Billingsley, Editor), 1995.

"Industry Analysis: The Telecommunications Industry," Seminar Proceedings, Charlottesville, VA: The Association for Investment Management and Research, (Author listing: R. S. Billingsley, Editor), 1994.

PAPERS PRESENTED AT PROFESSIONAL MEETINGS

"Further Evidence on the Gains from Diversification in Multi-Manager Programs," (Author listing: R. S. Billingsley and D. M. Chance). Presented at Managed Account Reports' conference, *Alternative Investment Strategies*, Chicago, Illinois, June 1995.

"The Gains from Diversification in a Multi-Manager Program: Some Preliminary Results," (Author listing: R. S. Billingsley and D. M. Chance). Presented at Managed Account Reports' conference, *Derivatives Investment Management*, Chicago, Illinois, July 1994.

"Estimation Bias in the Application of the Quarterly Discounted Cash Flow Model to Public Utility Cost of Capital Analysis," (Author listing: R. S. Billingsley and V. A. Bonomo). Presented at the Financial Management Association Meetings, San Francisco, California, October 1992.

"Firm Value and Convertible Debt Issues: Signalling vs. Agency Effects," (Author listing: R. S. Billingsley, R. E. Lamy, and D. M. Smith). Presented at the Eastern Finance Association Meetings, Hot Springs, Virginia, April 1991.

"The Valuation of Simultaneous Debt and Equity Offerings," (Author listing: R. S. Billingsley, R. E. Lamy, and D. M. Smith). Presented at the Financial Management Association Meetings, Orlando, Florida, October 1990.

"The Choice Between Issuing Convertible Bonds and Units of Debt with Warrants," (Author listing: R. S. Billingsley, R. E. Lamy and D. M. Smith). Presented at the Financial Management Association Meetings, New Orleans, Louisiana, October 1988. (Subsequently published in *The Journal of Financial Research*, see article citation.)

"The Choice Among Debt, Equity, and Convertible Bonds," (Author listing: R. S. Billingsley, R. E. Lamy, and G. R. Thompson). Presented at the Financial Management Association Meetings, Las Vegas, Nevada, October 1987. (Subsequently published in *The Journal of Financial Research*, see article citation.)

"The Regulation of International Lending: IMF Support, the Debt Crisis, and Bank Shareholders," (Author listing: R. S. Billingsley and R. E. Lamy). Presented at the Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, Chicago, Illinois, May 1986. (Subsequently published in the *Journal of Banking and Finance*, see article citation.)

"Valuation of Primary Issue Convertible Bonds," (Author listing: R. S. Billingsley, R. E. Lamy and G. R. Thompson). Presented at the Financial Management Association Meetings, Denver, Colorado, October 1985. (Subsequently published in *The Journal of Financial Research*, see article citation.)

"The Economic Impact of Split Ratings on Bond Reoffering Yields," (Author listing: R. S. Billingsley, R. E. Lamy, M. W. Marr, and G. R. Thompson). Presented at the Financial

Management Association Meetings, Toronto, Canada, October 1984. (Subsequently published in *Financial Management*, see article citation.)

"The Informational Content of Unrated Industrial Bonds," (Author listing: R. S. Billingsley and R. E. Lamy). Presented at the Financial Management Association Meetings, Atlanta, Georgia, October 1983. (Subsequently published in *Akron Business and Economic Review*, see article citation.)

"Bankruptcy Avoidance As A Merger Incentive: An Empirical Study of Failing Firms," (Author listing: R. S. Billingsley, R. P. Marquette, and D. J. Johnson). Presented at the Eastern Finance Association Meetings, New York, New York, April 1983. (Subsequently published in *Managerial Finance*, see article citation.)

"A Multivariate Analysis of the Ratings of Bank Holding Company Debt Issues," (Author listing: R. S. Billingsley and D. R. Fraser). Presented at the Eastern Finance Association Meetings, Jacksonville, Florida, April 1982. (Subsequently published in *The Financial Review*, see article citation.)

PROFESSIONAL EDUCATIONAL SEMINARS PLANNED AND ORGANIZED FOR THE ASSOCIATION FOR INVESTMENT MANAGEMENT AND RESEARCH

"Risk Management," Boston, MA, scheduled for March 1999. Conference Moderator: B. Putnam.

"Investing in the "New" Telecommunications Industry," New York, NY, September 1997. Conference Moderator: L. J. Haverty, Jr.

"Managing the Investment Professional," Chicago, IL, April 1996. Conference Moderator: R. S. Lannamann.

"Effective Risk Management in the Investment Firm," Boston MA, October 1995. Conference Moderator: G. L. Gastineau.

"Equity Analysis: The Role of Corporate Financial Decision Making," Washington, D.C., January 1995. Conference Moderator: R. S. Billingsley.

"Blending Quantitative and Traditional Equity Analysis," Boston, MA, March 1994. Conference Moderator: H. R. Fogler.

"Industry Analysis: The Telecommunications Industries," New York, NY, November 1993. Conference Moderator: R. S. Billingsley.

PROFESSIONAL SERVICE

Board of Directors
Society of Utility and Regulatory Financial Analysts

Association for Investment Management and Research Activities
(Formally the Institute for Chartered Financial Analysts).
Professional service beyond duties performed as Vice President at AIMR.

Grading Staff, Institute of Chartered Financial Analysts, June 1987.

Candidate Curriculum Committee, Institute of Chartered Financial Analysts, Quantitative
Analysis Sub-Committee, 1987-1989.

CFA Examination Analysis Team, Levels I-III, March 1988.

CFA Examination Grading Review Team, July 1988.

Faculty, CFA Refresher Course, Valuation: Equity, Charlottesville, VA, June 1992,
June 1993, June 1994, UCLA, November 1994.

Faculty, Basics of Equity Analysis, Montreal, Quebec, Canada, November 1994.

Consulting Clients

Association for Investment Management and Research

Bell Atlantic

BellSouth Telecommunications

The Financial Analysts' Review of the United States

Institut Penembangan Analisis Finansial, Jakarta, Indonesia

Securities Analysts' Association, Bangkok, Thailand

Sprint

Union Bank of Switzerland and UBS AG, Zürich and Basel

United States Telephone Association

Expert Witness Regulatory Testimony

Company	Docket No.	Year
United State Telephone Association et. al.	FCC 98-166	1999
BellSouth Telecommunications and Sprint-Florida (Florida)	FLPSC 980696	1998
BellSouth Telecommunications (Alabama)	ALPSC 25980	1998
BellSouth Telecommunications (Florida)	FLPSC 980696-TP	1998
BellSouth Telecommunications (Kentucky)	KPSC Adm. Case 361	1998
BellSouth Telecommunications (Mississippi)	MPSC 98-AD-035	1998
BellSouth Telecommunications (Mississippi)	MPSC 98-AD-544	1998
BellSouth Telecommunications (North Carolina)	NCPSC P-100, Sub 133B	1998
BellSouth Telecommunications (North Carolina)	NCPSC P-100, Sub 133D	1998
BellSouth Telecommunications (Tennessee)	TRA 97-00888	1998
BellSouth Telecommunications (Florida)	FLPSC 960833-TP	1997
BellSouth Telecommunications (Kentucky)	KPSC Adm. Case 360	1997
BellSouth Telecommunications (Tennessee)	TRA 97-01262	1997
BellSouth Telecommunications (South Carolina)	SCPSC 97-374-C	1997
BellSouth Telecommunications (Florida)	FPSC 960833-TP	1997
BellSouth Telecommunications (Alabama)	ALPSC 26029	1997
BellSouth Telecommunications (Georgia)	GAPSC 7061-U	1997
United States Telephone Association	FCC 96-262	1997
United States Telephone Association .	FCC: AA096-28	1996
Southern Bell (South Carolina)	SCPSC 95-862-C	1995
United States Telephone Association	FCC 94-1	1994
Southern Bell (South Carolina)	SCPSC 93-503-C	1994
Southern Bell (Georgia)	GPSC 3905-4	1994
Southern Bell (Florida)	FPSC 920260-TL	1993

Manuscript Referee

Journal of Banking and Finance

Journal of Financial Research

Journal of Futures Markets

Financial Review

Quarterly Journal of Business and Economics

Quarterly Review of Business and Economics

International Review of Economics and Finance

Japan and the World Economy

Journal of Business Research

Journal of Economics and Business

Engineering Economist

SELECTED INVITED SPEECHES/WORKSHOPS

Securities Analysts' Association, "Equity Valuation and Analysis Workshop," Bangkok, Thailand, March 1997.

Maryland - District of Columbia Utilities Association, "Telecommunications: Increasing Risk on the Horizon? An Investment Community Perspective, "71st Annual Fall Conference, Ocean City, MD, September 1995.

Bell Atlantic, "Do the 'Traditional' Cost of Equity Estimation Methods Work in the Current Environment?" National Accounting Witness Conference, Landsdowne Conference Resort, VA, April 1994.

Southeastern Electric Exchange, "Trends in Estimating the Cost of Equity for Public Utilities," St. Petersburg, FL, October 1993.

Securities Analysts' Association, "Common Problems in Valuing Equity Securities," Bangkok, Thailand, April 1992.

Virginia Bankers Association, Group Five (Credit Policy Committee), "Want to Sell Your Bank?" Interstate Banking in 1987 and Beyond," Credit Policy Conference, Radford, VA, April 1987.